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Prairie du Pont and Judy's Branch Watershed Plans

Draft Proposal

Project Overview: HeartLands Conservancy proposes to create two Watershed-Based Plans for the Prairie du Pont and Judy's Branch (St. Clair County only*) watersheds in St. Clair, Monroe, and Madison counties in Illinois. The watersheds are highly urbanized areas and contain all or portions of East St. Louis, Centreville, Alorton, Cahokia, Dupo, East Carondelet, Belleville, Fairview Heights, Millstadt, Caseyville, Washington Park, Sauget, Brooklyn, Fairmont City, and Columbia. Prairie du Pont watershed covers over 81,000 acres with the majority located within St. Clair County and the portion of Judy's Branch within St. Clair County covers just over 14,500 acres. Both watersheds flow into the Mississippi River – a primary source of drinking water in the St. Louis region.

Impaired waterways, flooding, drainage issues, and socioeconomic constraints in these watersheds are impacting the health of residents and the ecosystems that sustain them. A long-range watershed plan for both watersheds will identify the key issues contributing to watershed health problems, provide a set of recommended actions and potential locations to address these issues, and set forth a strategy to improve existing surface and ground water and mitigate future issues. A watershed plan will also provide greater opportunities for communities, groups, and counties to obtain funding to address issues in the watershed.

** A watershed plan for the Madison County part of Judy's Branch is already underway and funded by Madison County.*

Issues to Be Addressed or Considered in the Planning Process:

Impaired Streams. Three (3) of the major streams in the watershed, Prairie du Pont Creek Harding Ditch; and Schoenberger Creek North, and one lake; Frank Holten Lake, are identified as impaired on the 2018 Illinois EPA 303(d) list. Prairie du Pont Creek was on the impaired list in 2010, 2008, 2006 and 2004 and Harding Ditch, Schoenberger Creek, and Frank Holten Lake have been on the 303(d) list since 2004.

- Prairie du Pont Creek and Harding Ditch impairments listed in 2018 include dissolved oxygen, and past impairment include total phosphorus, total suspended sediment and fecal coliform, all of which can contribute to harmful algal blooms.
- Schoenberger Creek's impairments include bottom deposits, Total Phosphorus, sludge, turbidity, Ammonia, Manganese, and low dissolved oxygen, all of which contribute to human and ecological health problems.
- Frank Holten Lake's main impairment is Polychlorinated Biphenyls (PCBs), highly toxic chemicals that can affect the liver, cause birth defects, and effect development health in young children.

Stormwater Drainage, Infrastructure, and Flooding. Another important concern for the people living in these watersheds is the frequent and significant occurrence of flash flooding events, combined sewer system degradation, poor drainage, and poor water quality. These issues are found throughout the watershed but are most prevalent in the Centreville, Alorton, and East St. Louis communities. This combination of issues has contributed to unprecedented environmental health problems for the residents of these communities.

In Centreville and Alorton, for example, many residents have reported flooding and overflowing sewage repeatedly damaging their homes. These communities are in the low-lying area of the historic Mississippi River floodplain (American Bottom) which already makes drainage a challenge and is further exacerbated by stormwater that flows from the bluffs. The lack of drainage, frequent flooding and overflowing sewage is creating a fecal coliform pollution issue which has been identified by Southern Illinois University Edwardsville researchers and has caused many residents to fear drinking city's water supply due to possible health concerns.

East St. Louis is in a similar situation to Alorton and Centreville. The community is in the historic Mississippi River floodplain, has significant stormwater drainage and flooding issues. One of the main areas of concern is constant flooding along Marybelle St and Summit Ave. This area has historic flooding issues which caused residents to become stranded and led to the razing of all the homes on Dickman Place. Currently, Summit Ave/Marybelle St becomes inundated by flood water several times a year, with water beginning to encroach on more residential homes south of the street. The near constant standing water has become a health concern of the residents in the area. This flooded location has been identified as potential site for wetland rehabilitation by the US Army Corps of Engineers. East St Louis has also dealt with consistent flooding issues through the community from aging infrastructure and combined sewer overflows.

The increasing urbanization of these watersheds is causing increased stormwater runoff and highly eroded streambanks, eroding shorelines, and localized flooding. The proposed watershed plan will help identify these problem areas and develop strategies and information about how all of these issues can be addresses and future issues can be prevented.

Socioeconomic Issues and Environmental Justice. a large proportion of residents in the watersheds are among the lowest income in the United States. Many parts of the project area are considered racially or ethnically concentrated areas of poverty (RECAP).

Communities of color and low income neighborhoods bear the greatest burden of pollution, impacting their physical and economic health, quality of life, ability to thrive, learn, and work. Water quality and flooding issues cause lost work days, school absenteeism, higher health care/charity care costs, and site cleanup costs. These factors must be considered in the development of the watershed plan.

Project Tasks

1. Community Engagement. Communities in the watersheds need hands-on engagement conducted by local leaders who are trusted and known in their communities. HeartLands Conservancy's approach to community outreach and engagement starts before we even start

analyzing technical data and includes, providing stipends to up to 10 neighborhood leaders to assist with community outreach, meeting with community groups (such as East Side Health District, East Side Aligned, Lessie Bates Davis Neighborhood House, etc), conducting listening sessions with community organizations and residents, conducting surveys and mapping exercises, and convening a committee of experts in stormwater, local conditions, public health, environmental justice, and other disciplines to guide the formation of an action-based watershed plan.

In addition to this engagement, other outreach and education activities will be vital components of the planning process. Stakeholder meetings will be held with the municipalities in the watershed, as well as the counties, townships, community groups, local leaders, and other residents. A watershed plan brochure describing the planning process and large 30x40" maps will be produced for these meetings. Open House events will be held to engage and inform the public in the watershed planning effort, one in the first year and one in the second, for which flyers and display boards will be created.

Materials will be produced in both English and Spanish, and a bilingual outreach staff person will assist with all public meetings.

2. Technical and Advisory Committees. The watershed planning partners, which will likely include Midwest Streams, NGGREC, Madison, Monroe and St. Clair Counties and community officials, USACE, USEPA/IEPA, Metro East Sanitary District and Commonfields of Cahokia Water District will join with others with technical expertise to form a Technical Committee that provides technical support on stormwater, flooding, water quality, and other environmental issues. The Committee will be made up of individuals with different backgrounds and expertise in municipal, rural, suburban, and other areas, and will meet at least three times per year. The technical committee will review all of the data provided by the water resource inventory, promote water quality monitoring, set pollutant reduction targets, select Best Management Practices and review the watershed plan for clarity and comprehensiveness.

   An Advisory Group of residents, community groups, and organizations will also be formed to provide advice and support for the watershed planning process, create buy-in in communities, provide the planning team with feedback from the community, and review all of the watershed plan material before its submittal. This group will meet at the very beginning of the process and periodically throughout the planning process. Ideally, this group with members from the Technical Committee, will transition to a coalition that continues to meet periodically after the plan is complete to work on implementation and action items.

3. Data Analysis and Watershed Resources Inventory. The proposed Watershed-Based Plan will assess the water quality issues in the watershed, including pollutant loads to streams and causes and sources of these pollutants in the landscape. Water quality monitoring data from USGS (STORET) and other available sources will be used to assess water quality in streams. HeartLands Conservancy will likely partner with the National Great Rivers Research and Education Center (NGRREC) for the gathering pollutant load estimates. NGRREC will use a tool such as the Spreadsheet Tool for Estimating Pollutant Loads (STEPL) to calculate estimates of pollutant loads of nitrogen, phosphorus, and sediment by subwatershed, and analyze water quality data from all available sources to identify other water quality parameters.

Stream conditions will be assessed for streambank erosion, riparian condition, and channelization. If required, a low-flying helicopter will record geo-referenced video of the major (named) streams in the watershed. HeartLands Conservancy will likely partner with Midwest Streams, Inc. or US Army Corps of Engineers to conduct stream assessment. This data will be incorporated into the Watershed Resources Inventory (WRI).

Other data to be included in the WRI includes watershed boundaries (including the delineation of HUC14 subwatersheds for closer analysis of pollutant loading), geology and climate, soil classifications (hydric soils, hydrologic soil groups, and highly erodible soils), jurisdictions in the watershed, demographics, land use and land cover, flooding and the presence of threatened or endangered species.

4. Watershed Plan. The watershed-based plan will include the nine minimum elements from the EPA Clean Water Act section 319 Nonpoint Source Program's funding guidelines. It will include sections on goals and objectives, causes and sources of pollution, pollution reduction targets, Best Management Practices and other management measures recommended, monitoring, information and education, a project schedule, technical and financial assistance needed to implement the plan, and measuring success through charting interim, measurable milestones.

   A summary document outlining the key issues and action steps will also be created for easier use by the general public, community leaders and elected officials.

Project cost estimate: $166,000

TOTAL PROJECT COST		
Budget Category	**Total**	
1. Personnel	$	76,830.00
2. Travel	$	4,830.00
3. Supplies	$	10,665.50
4. Contractual Services	$	49,000.00
5. Indirect Costs (17%)	$	24,025.34

TOTAL PROJECT COSTS	$	165,351